Design Memorandum No. 03-2003

TO: Engineering Offices and Divisions
Districts
Consulting Engineers

FROM: Mark Gaydos, Design Engineer

DATE: March 4, 2003

SUBJECT: Design Exception Guidelines

Design Manual Reference:

Section I-06.06

__°__ Revision
_____ Supplemental

Introduction
This guidance is intended to Replace the Current Design Exception in the Design Manual. Attached is an example of a design exception.

Implementation
This guidance is to be implemented immediately. The Project Concept Reports requiring a Design Exception should be implemented as follows:

Guidance
The attached guidelines, covering exceptions to the general design guides, were received from the FHWA and are currently in effect, Appendix I-06 C. Designers contemplating the need for the use of design values, on a specific project, which are not in compliance with the accepted design guides listed earlier in this chapter, should follow the attached procedure in documenting and obtaining approval of the design exceptions. Generally, the following design elements will require a formal design exception if the use of the design values are not in compliance with the accepted values being contemplated:

- Design Speed
- Lane Width
- Shoulder Width
- Horizontal Curvature
- Vertical Curvature
- Grades
- Superelevation

- # Cross Slopes (including edge taper to slough)
- # Stopping sigh Distance
- # Bridge Width
- # Bridge Structural Capacity (including static loading of bridge railings)
- # Horizontal Clearance (not including clear zone)
- # Vertical Clearance

Address:

1) If the Design Exception is implemented prior to the completion of the Original Project Concept Report (PCR) it will be included in the PCR following the Decisions Page of the Executive Summary.
2) If the Design Exception is Implemented after the PCR then a cover sheet must accompany the Design Exception and will be processed separately.
3) Design Exceptions requires FHWA approval for NHS project > one million, approval internal to NDDOT for all others.

Questions
Any question regarding the content or implementation of this memorandum should be referred to Ronald J. Henke, Design Division, 701-328-4445.

Approved

Signed 3/21/03

Francis G. Ziegler, P.E. - Director, Office of Project Development Date

20/rjh/Design Memorandum 3 2003.wpd
attachment
c: FHWA

Design Exception
SNH-6-081(058)218
RP 218.580 to RP 228.331

The proposed project vertical curvature at RP 220.65 and 225.34 do not meet a design speed of 65 mph, according to the "A Policy on Geometric Design of Highways and Streets - 2001 4th Addition". The existing vertical curvature meets a design speed of 50 mph. To meet new design standards, the roadway within the area of the vertical curves would need to be reconstructed, which is outside the intent of the project. The cost to reconstruct these vertical curves is approximately $570,000.

As there have been no major crash problems on this section of highway related to its geometries, and it is not cost effective at this time to nor was it the original intent of this project to reconstruct the roadway, a design exception is requested for the proposed vertical curvature to remain the same. Correcting the vertical curvature when this roadway is reconstructed would be more economical.

Recommend for Approval: Yes X No_____

Signed _____ 1-07-02
Francis Ziegler- Director, Project Development Date

Approval Yes X No_____

Signed _____ 1-07-02
Grant Levi-Deputy Director for Engineering Date

Design Exceptions will be submitted to FHWA for approval on projects on the National Highway System (NHS) that exceed $1 million.